REMARKS

Claim 1 has been amended to clarify the claim and place this case in condition for allowance.

Claims 1-17 have been rejected under 35 USC 103(a) over Stine et al in view of Baker et al. Stine et al is concerned with providing electrical conductor cables that have an insulation cured with at least 1 megarad and is not concerned with the type of data cables of the present invention.

Stine et al does not disclose or suggest

1. Shielding tape being helically wrapped.

2. The shielding tape having a metal thickness of 0.33 to 2.00 mils. Stine et al states in column 3 lines 1 and 2 that the thickness of his **entire** shielding tape is about 0.85 mils which is substantially less than applicant's upper limit of 2.0 mils for the metal alone.

3. The shielding tape being wrapped around said twisted pair at a tension to eliminate a substantial amount of the air to leave a cross-sectional void area of less than 25% of the cross-sectional area of the shielded twisted pair cable.

4. A helical shielded twisted pair data cable with an adjusted to 20^0C. standard impedance deviation of 3.5 or less when said standard deviation is calculated around a mean or average impedance of 50 to 200 ohms.

5. A helical shielded twisted pair data cable having a rating at least out to 600 MHz;

6. A helical shielded twisted pair data cable having a standard impedance deviation measured on a 328 ft. or longer cable with at least 350 frequency measurements taken from 1.0 to 600 MHz and said standard impedance deviation is 3.5 or less and calculated around the mean or average impedance of 90 to 110 ohms.

7. The shielding tape being wrapped around said twisted pair at a tension to eliminate a substantial amount of the air to leave a cross-sectional void area of less than 18%;

8. The shielding tape has a metal thickness of 0.75 to 1.25 mils.

9. The shielding tape has a width of 0.5 to 1.5 inches, and is helically wrapped with the overlap of 25-65% and at a angle to the longitudinal axis of the twisted pair cable of $30\text{-}45^0$.

The Baker et al patent is directed to twin shielded data cables having a plurality of twisted pairs- see FIGS 1-2 - capable of carrying a volume of data of up to 155 Mb/S. The pluralities of twisted pairs are shielded with independent twin helically wrapped shields. The volume of data being carried is most likely due to the number of twisted pairs in the cable core. The cable core has a plurality of loosely gathered twisted pair cables wrapped by the **two** independent helically wrapped shields.

Baker et al does not disclose or suggest

1. Shielding tape being helically wrapped around a twisted pair . Baker et al helically wraps a bundle (plurality) of twisted pairs.

2. The shielding tape having a metal thickness of 0.33 to 2.00 mils. Baker et al is silent on this because he uses a twin shields and does not even contemplate using one shield on one twisted pair.

3. The shielding tape being wrapped around said twisted pair at a tension to eliminate a substantial amount of the air to leave a cross-sectional void area of less than 25% of the cross-sectional area of the shielded twisted pair cable. Baker et al is concerned only with a twin shield and not even tightly wrapping the bundle of twisted pairs

4. A helical shielded twisted pair data cable with an adjusted to 20^0C. standard impedance deviation of 3.5 or less when said standard deviation is calculated around a mean or average impedance of 50 to 200 ohms.

5. A helical shielded twisted pair data cable having a rating at least out to 600 MHz;

6. A helical shielded twisted pair data cable having a standard impedance deviation measured on a 328 ft. or longer cable with at least 350 frequency measurements taken from 1.0 to 600 MHz and said standard impedance deviation is 3.5 or less and calculated around the mean or average impedance of 90 to 110 ohms.

7. The shielding tape being wrapped around the one twisted pair at a tension to eliminate a substantial amount of the air to leave a cross-sectional void area of less than 18%;

8. The shielding tape has a metal thickness of 0.75 to 1.25 mils.

9. The shielding tape is helically wrapped at a angle to the longitudinal axis of the twisted pair cable of $30\text{-}45^0$ and with the overlap of 25-65%(Baker et al discloses the lower limit of 25% but does not relate this to a single shield and at applicant's tension) .

Applicant's independent claims 1 and 10 disclose a shield having a particular spatial arrangement relative to the twisted pair around which the shield wraps. Claim 1 specifically requires a particular tension to ensure a cross-sectional void area of less than 25% of the cross-sectional area of the shielded twisted pair. The tension should be such to provide a particular impedance range. Claim 10, rather than defining tension with a void space, defines it with an impedance limitation. Additionally, claims 1 and 10 specify that the shield has a helical wrap.

Applicant discovered that by utilizing a shield with a particular spatial arrangement provide a cable having significant advantages over previously shielded pairs. The prior art utilizing previous shielded pairs such as Stine et al and Baker et al, only recognizes that the shield will operate as a barrier to electrical interference. The prior art fails to recognize that the shield can also control electricals along the twisted pair such as capacitance, impedance and attenuation. Stine et al and Baker et al make it clear that its tape only serves to provide a shielding.

Stine et al and Baker et al do not teach together the claimed twisted pair cable of the present invention. The combination set forth by the Examiner can only be accomplished by a knowledge of applicant's invention. Therefore the rejection should be withdrawn.

The application is now in condition for allowance and an early Notice of Allowance is requested.

Respectfully submitted,

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